

A tale of two (nasal) prefixes: Evidence from Desa, a Malayic language of West Kalimantan

Carly J. Sommerlot¹
University of Texas at Arlington

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1 Introduction

The focal point of this talk is the nasal prefix found in many languages of Indonesia. In some languages, like Standard Indonesian (SI), this nasal prefix occurs as *meN-*; in others, like Jakarta Indonesian (JI), it occurs as just *N-*:

- | | | | | | |
|-----|-------------------------------|------------------|------------------|-------|----|
| (1) | Fera | men- ulis | buku. | | SI |
| | Fera | MEN-write | book | | |
| | 'Fera writes a book' | | | | |
| (2) | Anak | itu | nge- baca | buku. | JI |
| | child | that | N-read | book | |
| | 'The child is reading a book' | | | | |
- (Tjung 2006: 21)

The nasal prefixes in (1) and (2) are generally analyzed as actor voice morphemes (Voskuil 2000; Son and Cole 2004; Nomoto and Shoho 2007; Sneddon et al 2013), partially on the basis that they are in complementary distribution with the passive prefix *di-*; (2') is not possible.

- | | | | | | | |
|------|-------------------------------|------|---------------------|------|-------|----|
| (2) | Buku | itu | di- tulis | oleh | Fera. | SI |
| | book | that | PV-write | by | Fera | |
| | 'The book is written by Fera' | | | | | |
| (2') | *Buku | itu | di-men- ulis | oleh | Fera. | |
| | book | that | PV-MEN-write | by | Fera | |
| | 'The book is written by Fera' | | | | | |

However, there have been numerous other analyses proposed for the nasal prefix, including:

- a transitive marker (Chung 1976; Cole and Hermon 1998)
- an agentive marker (Wouk 1989; Gil 2002; Englebretson 2003)
- Case-marking the direct object (Guilfoyle et al 1992; Son and Cole 2004)
- an antipassive marker (Fortin 2006)
- having aspectual features (Soh and Nomoto 2009, 2010, 2015)

One feature of the nasal prefix that has been agreed upon is that **it blocks DP movement** across it. In (3), the DP *apa* has moved across the verb, which results in (3). (3'), with the nasal prefix, is ungrammatical.

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This contrasts with (4), where the DP *siapa* has not moved across the verb, and the nasal prefix is retained.

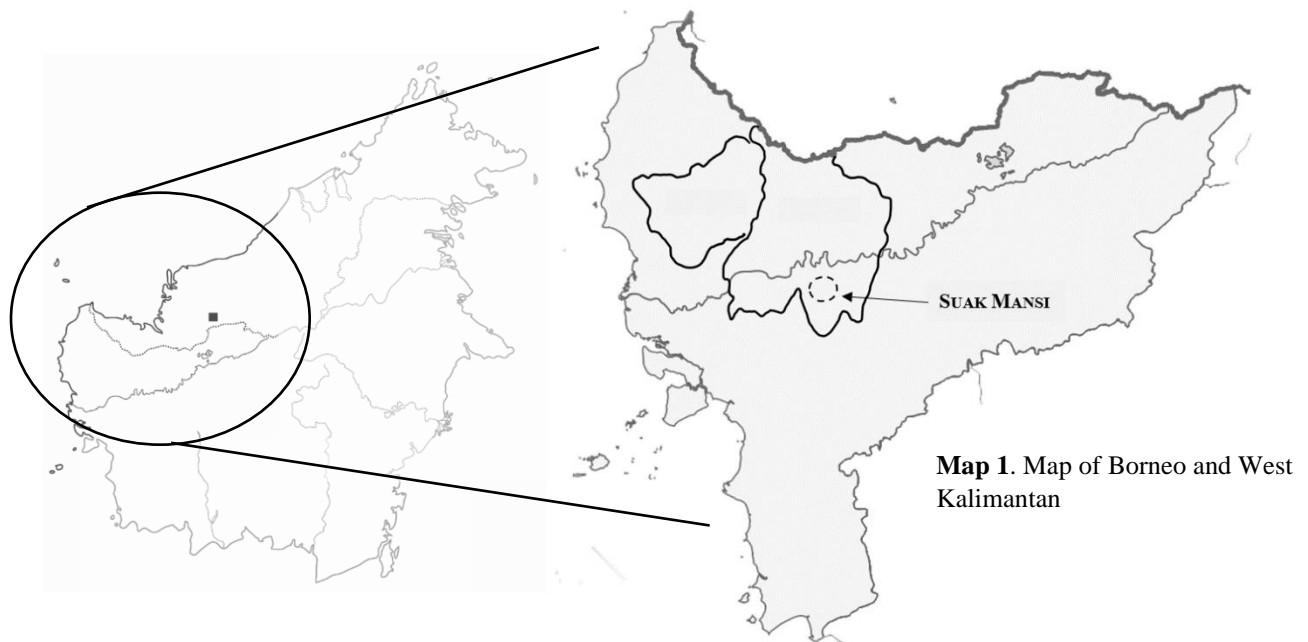
- | | | |
|------|---------------------------------------|----|
| (3) | Apa yang Fera beli? | SI |
| | what COMP Fera buy | |
| | ‘What did Ali buy?’ | |
| (3’) | *Apa yang Fera mem -beli? | |
| | what COMP Fera MEN-buy | |
| | ‘What did Fera buy?’ | |
| (4) | Siapa yang mem -beli buku itu? | |
| | who COMP MEN-buy book that | |
| | ‘Who bought the book?’ | |

This has been used as evidence that Indonesian (and other related languages) have a **subjects-only restriction** on extraction (Keenan and Comrie 1977).

In this talk, I provide data from a previously undocumented language of Indonesia that shows evidence **from extraction for a split *meN*- prefix into two prefixes**. This has the potential to reveal facts about the nasal prefix in other related languages and show variation among related languages in Indonesia.

2 Desa, a Malayic language of West Kalimantan

Desa² is a previously undocumented language spoken in Suak Mansi, in the Sanggau Regency³.



Map 1. Map of Borneo and West Kalimantan

² This is not to be confused with another language called Desa spoken further up north along the Kapuas River, as described by Collins and Herpanus (2014). Sommerlot (in prep) notes important differences between these two. *Desa* is the word for ‘village’ in a variety of languages of Indonesia, which is likely the reason multiple languages have this name.

³ This data was collected through original fieldwork over the course of three summers from 2017-2019.

Desa shows significant similarities with Malayic languages (Iban, Kanayatn, Indonesian, Malay), particularly in verbal morphology (Ross 2005).

2.1 Basic syntactic features of Desa

Desa syntax resembles Indonesian syntax in many ways: it has canonical SVO word order and both a nasal prefix and a *di-* prefix, used in undergoer-oriented sentences. The nasal prefix can occur as *meN-* (5) or as *N-* (5').

- (5) Sidah **men-**anam bunga di taman. (*meN-* + *tanam*)
 3PL MEN-plant flower in field
 'They plant flowers in the field'⁴
- (5') Sidah **n-**anam bunga di taman. (*N-* + *tanam*)
 3PL N-plant flower in field
 'They plant flowers in the field'

Undergoer-oriented sentences result in the undergoer moving to the sentence-initial position, the verb taking the prefix *di-*, and the agent occurring in a prepositional phrase headed by *oleh* 'by'.

- (6) Buku yen tongah **di-**tulis (oleh lelaki yen).
 book that PROG PV-write by man that
 'The book is being written by the man'

Desa additionally has an undergoer-oriented construction that resembles object voice in Indonesian (Chung 1976).

- (7) Kayu inya⁵ bewaq⁶.
 wood 3SG bring
 'He brings wood'

3 Extraction in languages of Indonesia

Given Desa's similarity in its voice system to Indonesian, we might expect that the nasal prefix in Desa also blocks DP movement across it in extraction contexts. Consider the pattern in SI and JI below, where both *meN-* and *N-* pattern identically in extraction.

3.1 Extraction in SI

As noted before, extraction that results in DP movement over the verb disallows the nasal prefix. This is true of A'-movement, as in *wh*-questions (8-9) (Saddy 1991; Soh 1998; Cole and Hermon 1998):

⁴ Like Indonesian, there is no tense marking in Desa. Dependent upon context, sentences such as (5) could be interpreted as having past or present tense.

⁵ There is one difference between the object voice in Desa and in Indonesian: Desa allows full DPs as agents, whereas Indonesian does not. As this does not bear on the analysis at hand, I leave this difference aside.

⁶ I am using the orthographic convention of representing a glottal stop as *q*.

OBJECT QUESTION

- (8) Apa_i [CP yang [TP Fera beli t_i]]?
 what COMP Fera buy
 ‘What did Ali buy?’
- (8’) *Apa_i [CP yang [TP Fera **mem**-beli t_i]]?
 what COMP Fera MEN-buy
 ‘What did Fera buy?’

SUBJECT QUESTION

- (9) Siapa_i [CP yang [TP t_i **mem**-beli buku itu]]?
 who COMP MEN-buy book that
 ‘Who bought the book?’

This applies in relative clauses as well, in (10-11):

OBJECT RC

- (10) Baju_i [CP yang [TP dia beli t_i]] kecil.
 shirt COMP 3SG buy small
 ‘The shirt that s/he is buying is small’
- (10’) *Baju_i [CP yang [TP dia **mem**-beli t_i]] kecil.
 shirt COMP 3SG MEN-buy small
 ‘The shirt that s/he is buying is small’

SUBJECT RC

- (11) Wanita_i [CP yang [TP t_i **mem**-beli baju ini]] tinggi.
 woman COMP MEM-buy shirt this tall
 ‘The woman who is buying this shirt is tall’

Furthermore, *meN-* blocks A-movement as well (Cole and Hermon 1998; Nomoto 2008). This explains why *di-* passives cannot take *meN-*, and further explains why the object voice in Indonesian can only take a bare, unaffixed (in terms of voice morphology) verb.

- (12) [TP [Buku itu]_i [VP dia baca t_i]].
 book that 3SG read
 ‘S/he read the book’
- (12’) *[TP [Buku itu]_i [VP dia **mem**-baca t_i]].
 book that 3SG AV-read
 ‘S/he read the book’

In both A-movement and A'-movement, if the DP moves over the verb, the nasal prefix cannot occur.

3.2 Extraction in Jakarta Indonesian

Jl patterns identically to Standard Indonesian, but the nasal prefix is *N-* instead. *N-* blocks DP movement in A'-movement in Jl (Wouk 1999; Tjung 2006). (13-14) shows this pattern in *wh*-questions.

OBJECT QUESTION

- (13) Apa_i [CP yang [TP anak itu baca t_i]]?
 what COMP child that read
 ‘What is the child reading?’
- (13’) *Apa_i [CP yang [TP anak itu nge-baca t_i]]?
 what COMP child that N-read
 ‘What is the child reading?’

SUBJECT QUESTION

- (14) Siapa_i [CP yang [TP t_i nge-baca buku]]?
 who COMP N-read book
 ‘Who is the one that is reading a book?’ (Tjung 2006: 22a, 23a)

And again, like SI, this is true in relative clauses as well.

OBJECT RC

- (15) Buku_i [CP yang [TP anak itu baca t_i]] mahal.
 book COMP child that read expensive
 ‘The book that the child is reading is expensive’
- (15’) *Buku_i [CP yang [TP anak itu nge-baca t_i]] mahal.
 book COMP child that N-read expensive
 ‘The book that the child is reading is expensive’

SUBJECT RC

- (16) Anak [CP yang [TP t_i nge-baca buku]] temen gue.
 child COMP N-read book friend 1SG
 ‘The child that is reading a book is my friend’ (Tjung 2006: 22b, 23b)

Object voice in JI additionally cannot occur with the nasal prefix, suggesting that *N-* also blocks *A-* movement.

- (17) [TP [Kain itu]_i [VP gua beli t_i]].
 cloth that 1SG buy
 ‘The cloth was bought by me’
- (17’) *[TP [Kain itu]_i [VP gua nge-beli t_i]].
 cloth that 1SG N-buy
 ‘The cloth was bought by me’ (Tjung 2006: 63b)

3.3 Extraction in Desa

Desa, at first glance, seems to show this same pattern. The nasal prefix *meN-* blocks *A’*-movement over the verb; this is true of *wh*-questions, as seen in (18-19).

OBJECT QUESTION

- (18) Opai_i [CP yang [TP inya boli t_i]]?
 what COMP 3SG buy
 ‘What did s/he buy?’

- (18') *Opai_i [CP yang [TP inya **mem-boli** *t_i*]]?
 what COMP 3SG MEN-buy
 'What did s/he buy?'

SUBJECT QUESTION

- (19) Sopai_i [CP yang [TP *t_i* **mem-ewaq** kayu]]?
 who COMP MEN-bring wood
 'Who brings wood?'

And additionally holds in relative clauses as well:

OBJECT RC

- (20) Tali_i [CP yang [TP aku ikuq *t_i* keq perau yen]] kuat.
 rope COMP 1SG tie to boat that strong
 'The rope that I tie to the boat is strong'

- (20') *Tali_i [CP yang [TP aku **men-ikuq** *t_i* keq perau yen]] kuat.
 rope COMP 1SG MEN-tie to boat that strong
 'The rope that I tie to the boat is strong'

SUBJECT RC

- (21) Aku me-liet [lelaki yen]_i [CP yang [TP *t_i* **men-ikuq** tali yen]].
 1SG AV-see man that COMP MEN-tie rope that
 'I see the man that ties the rope'

However, **this is not true of N-**. *N-* does not block A'-movement, as it is acceptable in both subject and object extraction contexts.

OBJECT QUESTION

- (22) Opai_i [CP yang [TP inya **m-oli** *t_i*]]?
 what COMP 3SG N-buy
 'What did s/he buy?'

SUBJECT QUESTION

- (23) Sopai_i [CP yang [TP *t_i* **m-ewaq** kayu]]?
 who COMP N-bring wood
 'Who brings wood?'

OBJECT RC

- (24) Tali_i [CP yang [TP aku **n-ikuq** *t_i* keq perau yen]] kuat.
 rope COMP 1SG N-tie to boat that strong
 'The rope that I tie to the boat is strong'

Note that the affixation of *N-* is not limited to certain verbs or contexts, but occurs quite frequently:

- (25) Opai yang sudah **ny-ual**?
 what COMP 3PL N-sell
 'What are they selling?'
- (26) Opai yang lelaki yen **m-igang**?
 what COMP man that N-hold
 'What is the man holding?'

- (27) Buku to, opa^q-ku m-oli.
 book that father-1SG N-buy
 ‘That book, my father bought’
- (28) Beiju yang inya tongah m-oli mahal.
 shirt COMP 3SG PROG N-buy expensive
 ‘The shirt that s/he bought is expensive’
- (29) Tolong makan buah yang aku n-ungkong.
 please eat fruit COMP 1SG N-cut
 ‘Please eat the fruit that I cut’

Both *meN*- and *N*- block A-movement, however; neither are allowed in object voice in Desa.

- (30) [_{TP} Kayu_i [_{VP} inya bewaq *t_i*]].
 wood 3SG bring
 ‘He brings wood’
- (30’) *[[_{TP} Kayu_i [_{VP} inya **mem**-ewaq *t_i*]].
 wood 3SG MEN-bring
 ‘He brings wood’
- (30’’) *[[_{TP} Kayu_i [_{VP} inya **m**-ewaq *t_i*]].
 wood 3SG N-bring
 ‘He brings wood’

The pattern in the three languages is summarized in Table 1 below.

	A'-movement		A-movement
	Subject Extraction	Object Extraction	
<i>meN</i> - (SI)	✓	✗	✗
<i>N</i> - (JI)	✓	✗	✗
<i>meN</i> - (D)	✓	✗	✗
<i>N</i> - (D)	✓	✓	✗

Table 1. Blocking effects of the nasal prefixes in SI, JI, and Desa (D)

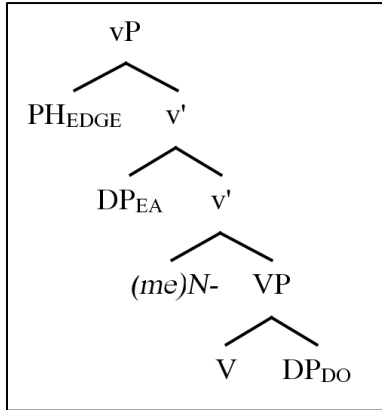
Desa thus crucially differs from SI and JI in **having evidence of two separate prefixes**. Furthermore, while *me*- patterns like the nasal prefixes in SI and JI, *N*- does not, and thus requires a different analysis to account for its distribution.

4 Analysis

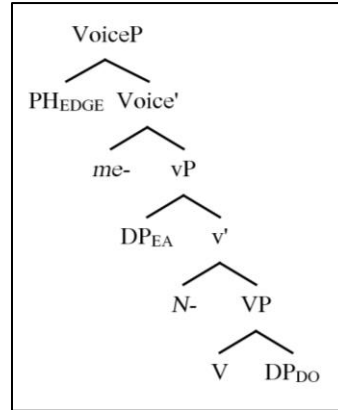
The extraction data suggests that Desa cannot be analyzed the same as SI and JI, given its different pattern. I argue that the two separate prefixes in Desa represent **two separate functions in the syntax** that are bundled together in SI and JI. Furthermore, the overt morphology is a realization of the underlying structure.

Crucially, I am arguing that while Desa must have a **split-Voice projection** (Pylkkänen 2002; Harley 2017), SI and JI only have one higher verbal projection. The nasal prefix in SI and JI has ‘bundled’ the functions that *me*- and *N*- have separately in Desa. The two different structures are given below.

SI / JI



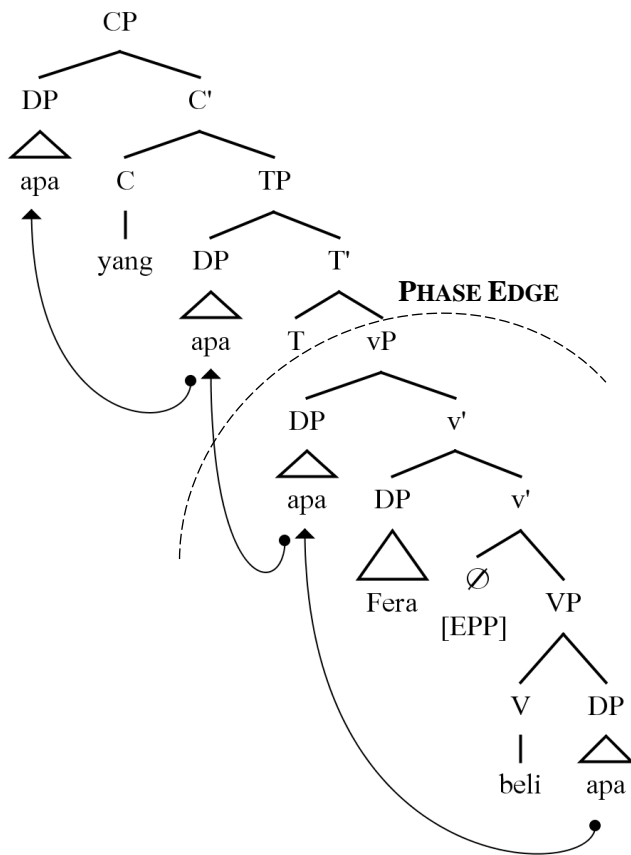
DESA



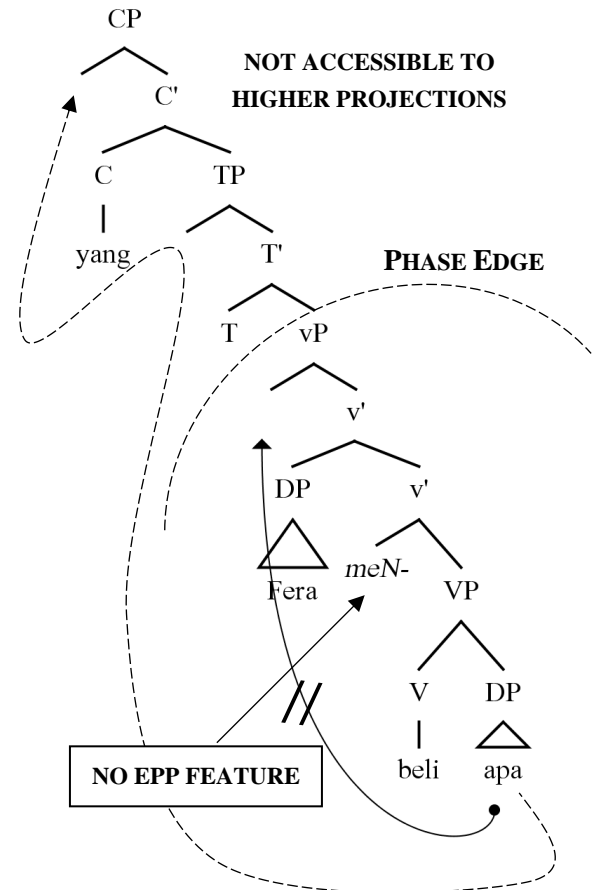
4.1 Analysis of SI and JI

Previous analyses of SI have relied upon a **phase-based approach** (Aldridge 2008; Nomoto 2008; Cole et al 2008). They propose that *meN-* occupies *v* (Voice in Cole et al 2008) and lacks an EPP feature, and that prevents an object from moving to the edge of the vP phase. Compare (31a) to (31b) below.

(31a) Apa yang Fera beli?
 'What does Fera buy?'



(31b) *Apa yang Fera mem-beli?
 'What does Fera buy?'



(31b) shows that *meN-* is in complementary distribution with a null prefix which does carry an EPP feature, and forces movement of the DP_{object} to the phase edge.

4.2 Analysis of Desa

I suggest extending this analysis to the Desa data, with modifications to account for the differences. The most crucial distinction is that Desa has **two prefixes: *me-* and *N-***. I extend the phase-based approach in the following ways:

SI/ JI

Verbal projection is vP
meN- is located in highest phase
meN- lacks an EPP feature
 Null morpheme with EPP
meN- as actor voice; license EA / assigns [ACC]

DESA

Verbal projection is VoiceP + vP
me- is located in highest phase; *N-* in v
me- lacks an EPP feature
 Null morpheme with EPP (in Voice)
me- as actor voice; *N-* licenses EA / assigns [ACC]
me- subcategorizes for *N-*

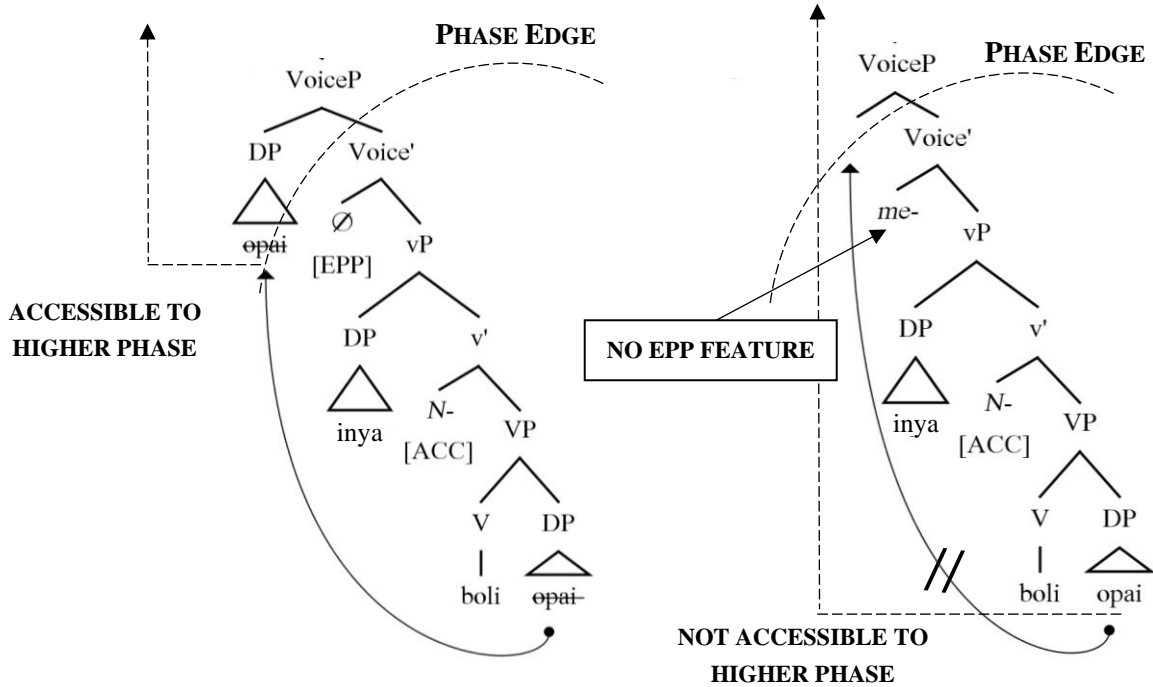
The two prefixes are located in different heads: *me-* in Voice, and *N-* in v. *N-* is located in v, but vP isn't a phase edge, and thus *N-* does not affect movement out of the clause. When just *N-* is prefixed on the verb,

the head of voice is occupied by a null morpheme which carries an EPP feature and is in complementary distribution with *me-*. As *N-* licenses the external argument and assigns [ACC], this accounts for why it blocks A-movement.

Compare the two structures below for (32a) with just *N-*, and (32b) with *me-* and *N-*.

(32a) Opai yang inya m-oli?
‘What does s/he buy?’

(32b) *Opai yang inya mem-oli?
‘What does s/he buy?’



4.3 Regarding *N-*'s function

4.3.1 *Unergatives and unaccusatives*

I have analyzed *N-* as licensing an external argument and assigning [ACC]. The nasal prefix *meN-* has previously been analyzed as having both of these functions by different authors (being associated with an external argument (Son and Cole 2008; Nomoto 2008); Case-marking the direct object (Guilfoyle et al 1992; Son and Cole 2004)). **In Desa, I am arguing that this function is associated with *N-* only.**

One piece of evidence comes from *N-*'s behavior with intransitives. If *N-* both introduces the external argument and assigns Accusative case, it should not be able to occur on any intransitives. If it only introduced the external argument, it should be able to occur on unergatives only.

UNERGATIVES	UNACCUSATIVES
be-kejar 'run'	jetu 'fall' (*ny-etu)
be-jalan 'walk'	detang 'come' (*n-etang)
be-nyani 'sing'	tumbuh 'grow' (*n-umbuh)
be-nafas 'take a breath'	tidoq 'sleep' (*n-idoq)
be-diri 'stand'	roboh 'collapse' (*ny-oboh)

Table 2. Unergative and unaccusative verbs in Desa

Table 2 shows a handful of unergative and unaccusative verbs in Desa. Unaccusatives occur with no morphology. Unergatives often take a prefix *be-* (which seems analogous to *ber-* in Indonesian)⁷. There are a few verbs that, without *be-*, look like they could have a nasal prefix. These are the verbs *nari* ‘to dance’ and *nangis* ‘to breathe’. However, these are words that are likely borrowings, as they occur in a multitude of languages throughout Indonesia.

There is one environment in which some unaccusative verbs can take *N-*. Consider the examples in (33-34) below.

- (33a) Inya jetu.
3SG fall
‘S/he falls’
- (33b) Inya **ny-**etu pinang yen.
3SG N-fall cup that
‘S/he drops the cup’
- (34a) Aku tidoq.
1SG sleep
‘I sleep’
- (34b) Aku tauq **n-**idoq onaq bijaq yen.
1SG can N-sleep child that
‘I can put the children to sleep’

The inclusion of *N-* results in an increase in valency (as well as a change in meaning). When this occurs, *N-* must be prefixed onto the verb, indicating 1) that there is now an agent, and 2) there is a direct object with which to assign [ACC] to.

4.3.2 Volition

Further evidence of *N-*’s function comes from contexts with clear volition by the agent. When there is no clear volitional agent, there are two strategies in which to convey this: use an undergoer-oriented construction, or use a bare verb. Consider the pair in (35):

- (35a) Aku losi beiju-ku.
1SG lose shirt-1SG
‘I lost my shirt (but it wasn’t my fault)’
- (35b) Aku **ni-**losi-ken⁸ beiju-ku.
1SG N-lose-CAUS shirt-1SG
‘I lost my shirt (and it was my fault)’

The nasal prefix *N-* is only possible in (35b), when the agent is at fault for the action.

⁷ One potential analysis of *be-* could be that it introduces the external argument but does not assign Accusative case. This would account for why it occurs on unergatives (not but unaccusatives), but does not occur on transitive verbs.

⁸ There is additionally a suffix *-ken* here. This looks like the causative suffix *-kan* in Indonesian. It is currently not clear if this is a productive suffix, or a byproduct of using Indonesian in elicitation.

5 Conclusions

I have argued that Desa has **two nasal prefixes**, *me-* and *N-*, and *me-* is a voice morpheme, while *N-* licenses the external argument and assigns [ACC] to the DP object. *Me-* subcategorizes for *N-*, which accounts for why they always co-occur.

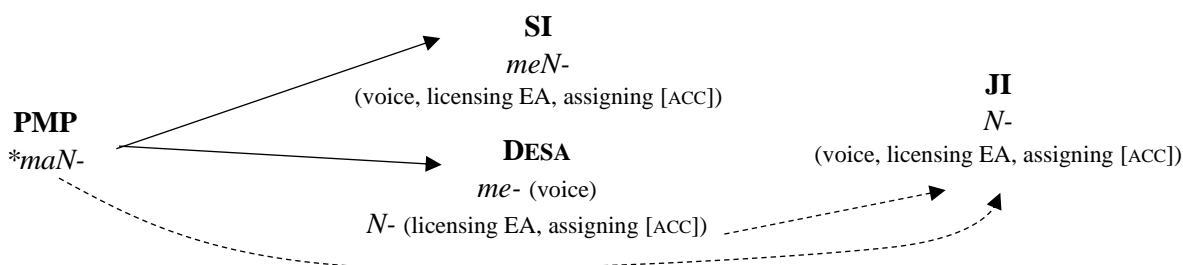
Desa crucially has a split-Voice projection, which allows for both prefixes. This contrasts with SI and JI, where only the highest projection (vP in Aldridge 2008; VoiceP in Cole et al 2008) is necessary as the structure reflects the morphological realization.

5.1 Reconsidering *meN-* and *N-* in related languages

I have argued on the basis on this data that ***meN-* in SI or *N-* in JI is contributing both functions of *me-* and *N-* in Desa**: attributing some voice function, but additionally licensing the external argument and assigning [ACC]. This could account for why previous authors have struggled with identifying the function of *meN-*: it has several interrelated functions.

5.1.1 Diachronic implications

How did this develop? The *meN-* prefix has been reconstructed to Proto-Malayo-Polynesian (PMP) as **maN-*, and has further been reconstructed to Proto-Malayic (Ross 2005). So when did *maN-* split into two prefixes, as found in Desa? Malayic languages of Borneo are significantly understudied, but there was no split in Indonesian/Malay. It has been noted that languages of Indonesia, if they have any nasal prefix at all, are more likely to have *N-* (Gil 2002). This has interesting implications:



Did **maN-* first divide into two (like in Desa), and then re-fuse into one morpheme *N-* in Jakarta Indonesian? Or did it simplify into *N-* from PMP? Why is Desa the only documented language with a split in the nasal prefix?

5.1.2 The role of *N-* in other languages

Furthermore, Gil (2002) notes that *N-* is used instead of *meN-* in a variety of languages in Indonesia. Does the *N-* in these languages pattern more like the *N-* in Desa (not as a voice marker but as having specific syntactic functions), or does it pattern more like the *N-* in JI (which is analogous to *meN-* in SI)? I have additionally conducted fieldwork on a variety of Land Dayak languages, and these languages show an interesting pattern where *N-* is allowed in undergoer-oriented constructions. Below is data from two Land Dayak languages, Beaye and Ribun. Word order and the use of a preverbal voice marker indicate that these constructions are in the undergoer voice. However, the nasal prefix occurs as well.

- (36) Dio han kunaq ko n-oro. Beaye
 house this UV 2SG.I AV-destroy
 ‘This house was destroyed by you’

- (37) Obiyon koyuv leq nahi han n-igang. Ribun
 many wood UV man that AV-hold
 ‘A lot of wood is held by that man’

Neither the analysis of the nasal prefix in SI/JI nor the analysis in Desa can account for this pattern. This may suggest that the nasal prefix in some languages diverges further.

What this reveals is a **necessity of including understudied languages in syntactic analysis**. Just on the basis on SI, an analysis of the nasal prefix cannot be complete. By including lesser-studied languages, a more accurate and developed theory of this prefix can be possible.

5.2 Future directions

One interesting feature of these two prefixes is that there does not seem to be any identifiable difference in distribution in actor-oriented constructions. The use of *N-* (not as a separate prefix, but as a shortened, colloquial form) in Indonesian has been found to be loosely associated with high transitivity (Kaswanti Purwo 1986; Wouk 2004). At this point, this does not seem to be the case in Desa, but this requires more careful analysis and data collection in the future.

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